

Work Order ID 79256

\*79256\*

Page 1

January-24-12 10:59:33 AM

Item ID: D206-642-151

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Replacement Skidtube

Stop \*NS2\*

Start Date: 24/01/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 15/03/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: M.L.J.

Date: 12/01/25 Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3804	A								
IIN-D206-642	O								

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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**\*N900040100\***

Setup Start **\*NS1\***

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Start Date: 24/01/2012 Start Qty: 1.00

**\*1\***

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Required Date: 15/03/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

110

0.00

**\*110\***

Skidtubes

0.00

Skidtubes

Skidtubes

Memo

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804 Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod *M12064*

4-Grind weld flush to cap on top surface only

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

*B 12/02/23*

*SAD 12-02-28*

*PC 12/02/29*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*1\***

Cust Item ID:

Required Date: 15/03/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.  
\*\*\*\*no wearplate holes for this skidtube\*\*\*\*

17-Deburr tube and blow out chips from inside the tube

*DL 12/02/29*

120

QC6- Inspect dimensions to drawing

0.00

**\*120\***

QC

Memo

0.00

Quality Control

*S 12/03/01*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*140*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
150	QC3- Inspect Part Finish	0.00							
<b>*150*</b>									
QC	Memo	0.00							
Quality Control									
160		0.00							
<b>*160*</b>	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

① HG 12-3-1  
/ 12/03/01

① SAD 12-03-01

OK 12/03/01

W/O:		WORK ORDER CHANGES					
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**\*1\***

Cust Item ID:

Required Date: 15/03/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170 QC6- Inspect dimensions to drawing 0.00

**\*170\***

QC Memo 0.00

Quality Control

1 0 BE 12/03/01

180 Skidtubes 0.00

**\*180\***

Skidtubes Memo 0.00

Skidtubes 1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12

Hrs. cure time before cutting

Start Date: 12/03/01 Time: 2:26

Finish Date: 12/03/02 Time: 11:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 119999

Sikaflex expire date: 12/08/13

DL 12/03/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 24/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 15/03/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

1 0 BE 12/02/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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 Required Date: 15/03/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200	Skidtubes	0.00							
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**\*200\***

Skidtubes

Skidtubes

## Memo

0.00

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod mid0164

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE BE 12/03/04

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

*BE 12/03/02*

*BB 12/03/05*

*DP 12-3-5*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	HandFinishing	0.00							
<b>*210*</b>	HandFinish	0.00				1	<del>BB</del>	12/03/05	
Hand Finishing	Memo Install D2680-041 Nut Plate as per Dwg D3804								
215	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
<b>*215*</b>	QC	0.00							
Quality Control	Memo								
220	QC10- Inspect visual per QSI004- ground welds	0.00							
<b>*220*</b>	QC	0.00							
Quality Control	Memo								

*2.03.06*

*8/26/05*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC5- Inspect part completeness to step on W/O	0.00							
<b>*230*</b>									
QC	Memo	0.00							
Quality Control									
240	Pressure Wash per QSI005 4.3	0.00							
<b>*240*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
<b>*250*</b>									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 3:45								
	OVEN TEMPERATURE: 320°F								
	FINISH TIME: 4:15								

MI 20222

1X/M-F 12/03/06

1X/M-F 12/03/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Run Start **\*NR1\***Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC3- Inspect Part Finish	0.00							
<b>*260*</b>									
QC	Memo	0.00							
Quality Control									
270		0.00							
<b>*270*</b>	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								

IRH d JU 12/03/09

IRH d JU 12/03/09

RH

W/O:		WORK ORDER CHANGES					
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 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	HandFinishing	0.00							
<b>*280*</b>									
HandFinish	Memo	0.00							
Hand Finishing	✓ 1- Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/RSikaflex-291 <u>1119999</u> Sikaflex expire date: <u>11/09</u> ✓ 2- Install wearplate as per dwg 2-Wing Walk as per Dwg D3804 and QSI 005 4.4 ✓ Batch: <u>11112012</u>								
290	QC3- Inspect Part Finish	0.00							
<b>*290*</b>									
QC	Memo	0.00							
Quality Control									

8 12/03/13

11217 OK 12312

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube  
 Start Date: 24/01/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 15/03/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300 <b>*300*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00							
310 <b>*310*</b> Packaging Packaging	Packaging  Memo Identify and pack for shipping as per PPP: D206-642-151 Location: _____ PPP Rev: _____	0.00 0.00							
320 <b>*320*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00 0.00							

8/2/13/13

PP 71458

12/3/14

12/3/14

12-03-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

January-24-12 10:59:37 AM

Page 1

Work Order ID: 79256

\*79256\*

Parent Item: D206-642-151

\*D206-642-151\*

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC IPP  
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620 *D2620* Skidtube, 206 Skidtube		Manufactured	No			110	Each	8.0000	1	1			
					B79542				**			DL 12/02/16	
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			(1)				
				LG	8								
				71617	2								
				77997	6								
D2647 *D2647* Cap		Manufactured	No			110	Each	133.0000	1	1			
									**			BE 12/02/23	
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				LG002	133								
				73826	24								
				75482	109								
CR3212-4-04 *CR3212-4-04* Cherry Rivet		Purchased	No			180	Each	10,198.00	52	52			
									**			DL 12/03/01	
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				ST331	364								
				116471	78								
				117816	3								
				118686	1								
				118840	16								
				119017	256								
				119075	10								
				st510	9834								
				119075	9834								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-24-12 10:59:37 AM

Page 2

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2654-1 Manufactured No

180

Each

25.0000

1

1

**\*D2654-1\***

Web

\*\*

DC 12/03/01

Location

Loc Qty

Loc Code

LG

25

77278

2

77279

10

77280

3

77281

10

79541

(1)

D3286-1 Manufactured No

180

Each

231.0000

2

2

**\*D3286-1\***

Doubler

\*\*

PC 12/03/01

Location

Loc Qty

Loc Code

LG002

233

74872

6

78014

109

ST046

-2

76772

116

(2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-24-12 10:59:37 AM

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2649                      Manufactured    No                      200            Each            559.0000            19            19

**\*D2649\***

Cross Bolt Spacer

**\*\***

*BE 12/23/02*  
*B79504 x/9*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	40	
77574	40	
LG001	519	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
78020	400	

D3286-3                      Manufactured    No                      200            Each            128.0000            2            2

**\*D3286-3\***

Spacer

**\*\***

*BE 12/23/04*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	100	
78015	100	
LG001	28	
74117	1	
76773	27	

*2*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-24-12 10:59:37 AM

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

210 Each 110.0000 1

**\*D2680-041\***

Nut Plate

\*\*

1 12/03/05

Location Loc Qty Loc Code

ST013 14

75479 14

ST019 96

76790 96

CR3212-4-03 Purchased No

210 Each 1,650.000 2

**\*CR3212-4-03\***

Cherry Rivet

\*\*

2 12/03/05

Location Loc Qty Loc Code

FP002 660

114859 660

ST331 990

110139 2

119017 988

AN960JD416 NAS1149D0463J Purchased No

210 Each 0.0000 1

**\*AN960.ID416\***

Washer

\*\*

1 11/03/04 (x1) 11/03/09

CCR264SS3-3 Purchased No

210 Each 885.0000 2

**\*CCR264SS3-3\***

Cherry Rivet

\*\*

2 12/03/05

Location Loc Qty Loc Code

ST331 885

113973 2

117849 135

119017 748

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

January-24-12 10:59:37 AM

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

277.0000

1

1

**\*MS27039-4-06\***

Screw

\*\*

11/03/09

Location

Loc Qty

Loc Code

ST292

277

119075

277

x1

D2651-1

Manufactured

No

270

Each

527.0000

6

6

**\*D2651-1\***

Plug

\*\*

1378584 (x6) 11/03/09

Location

Loc Qty

Loc Code

FP001

413

57869

1

66445

10

69018

2

70827

2

70839

8

70942

14

71037

53

73827

23

FP-A

114

77559

114

78124

300

D2651-3

Manufactured

No

270

Each

2,547.000

6

6

**\*D2651-3\***

O-Ring

\*\*

11/03/09

Location

Loc Qty

Loc Code

FP001

547

61962

12

73828

535

x6

FP-A

2000

78126

2000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-24-12 10:59:37 AM

Page 6

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3873-1

Manufactured No

280

Each

509.0000

14

14

**\*D3873-1\***

Bushing

**\*\***

*B 79561 (x14) MU 12/03/09*

Location

Loc Qty

Loc Code

ST067

509

64760

1

68247

4

73829

19

73830

2

78017

483

D2646

Manufactured No

280

Each

96.0000

1

1

**\*D2646\***

Aft Cap

**\*\***

*B 78018 (x1) MU 12/03/12*

Location

Loc Qty

Loc Code

FP002

96

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825

78

D3805-041

Manufactured No

280

Each

0.0000

1

1

**\*D3805-041\***

Wearplate Assembly Fwd, Low Gear

**\*\***

*78604*

*1 B 12-3-12*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-24-12 10:59:37 AM

Page 7

Work Order ID: 79256

**\*79256\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 24/01/2012

Required Date: 15/03/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

280

Each

1,907.000

2

2

**\*MS27039-1-08\***

Screw

\*\*

HL 12/03/12

Location

Loc Qty

Loc Code

ST291

1907

117423

77

118910

2

119075

328

119109

500

120308

1000

x2

MS21042L3

Purchased

No

280

Each

5,641.000

7

7

**\*MS21042L3\***

Nut

\*\*

HL 12/03/12

Location

Loc Qty

Loc Code

ST300

5641

117441

16

117885

32

118451

5

118927

3

119017

5120

119075

465

y7

D3805-045

Manufactured

No

280

Each

7.0000

1

1

**\*D3805-045\***

Wearplate Assembly Aft, Low Gear

\*\*

1378011 (x1) HL 12/03/12

Location

Loc Qty

Loc Code

FP001

7

73817

1

74896

1

76786

5

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2

**\*AN960JD10L\***

Washer

\*\*

11/20/2012 x2 HL 12/03/12

January-24-12 10:59:37 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

January-24-12 10:59:37 AM

**\*79256\***

**\*D206-642-151\***

**Required Date:** 15/03/2012

**Required Qty: 1.00**

280	Each	1,231.000	7	7
-----	------	-----------	---	---

**\*\***

Bolt

**Location**

Loc Qty

Loc Code

ST353

1231

117619

4

119086

1227

280	Each	3,670.000	7	7
-----	------	-----------	---	---

**\*\***

Washer

**Location**

**Loc Qty**

**Loc Code**

ST298

3670

117601

61

118077

1

118612

18

119537

1041

120142

1549

120308

1000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

#### NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

UNCONTROLLED COPY  
SUBMIT FOR REVISION

WITH NO CHANGE  
W/NO CHG  
NO 79256 M.L.J

12/01/25

RELEASED  
CP 09.03.03  
per ECN 09-598

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	97		
DRAWN	97		
CHECKED	97		
MFG. APPR.	97		
APPROVED	97		
DE APPR.	97		
DATE	08.07.07		

DART AEROSPACE USA, INC	
PORT HADLOCK, WA	
DRAWING NO.	REV. A
D3804	SHEET 1 OF 5
TITLE	SCALE
SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

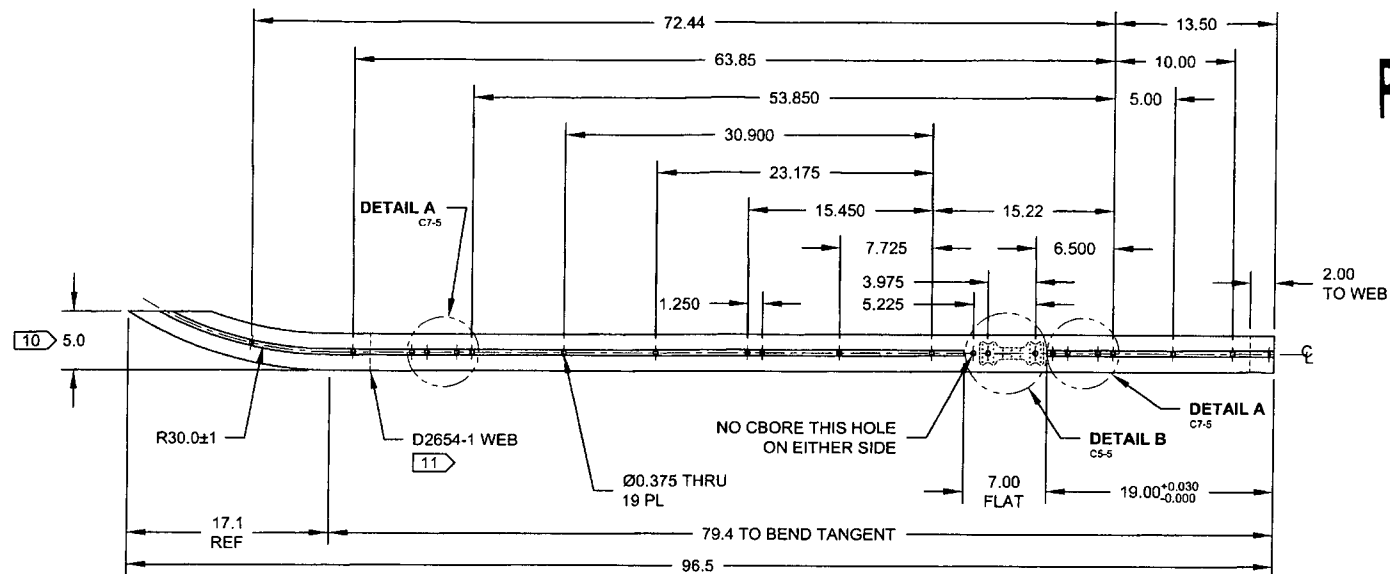
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

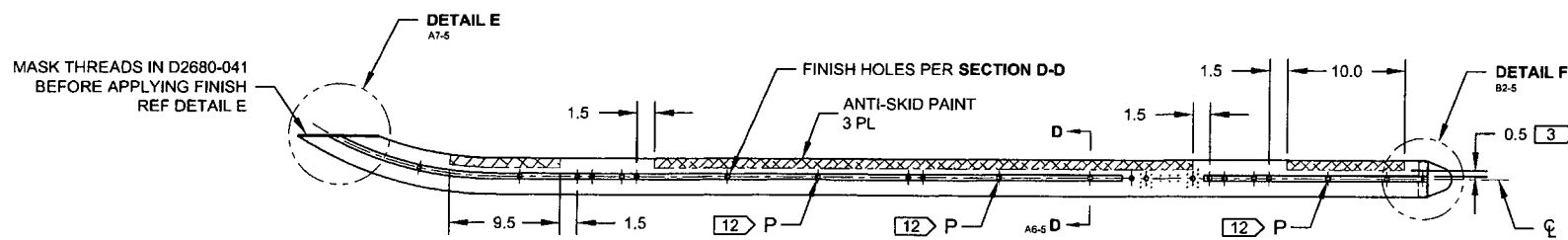
**NOTE:** Date & initial all entries

79256

RELEASED  
09.03.03



**D3804-041 BENDING/DRILLING DETAIL**



**D3804-041 ASSEMBLY/FINISHING DETAIL**

DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 2 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

79256



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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

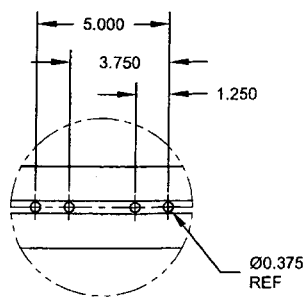
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

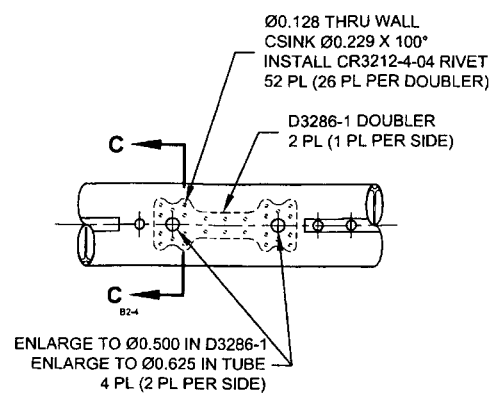
**NOTE:** Date & initial all entries

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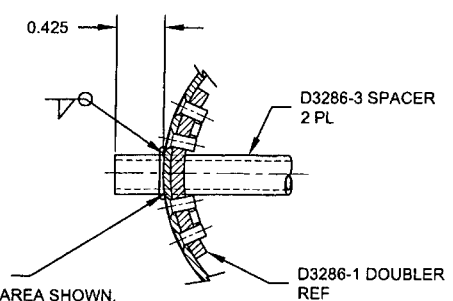
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09.09.03



**DETAIL A**  
SCALE NONE

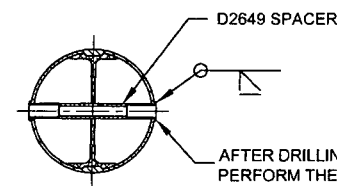


**DETAIL B**  
SCALE NONE



- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

**SECTION C-C**  
PARTIAL SECTION  
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

**SECTION D-D**  
FOR Ø0.375 HOLES ONLY  
SCALE NONE

DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 4 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

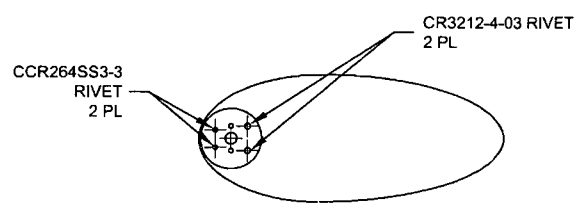
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

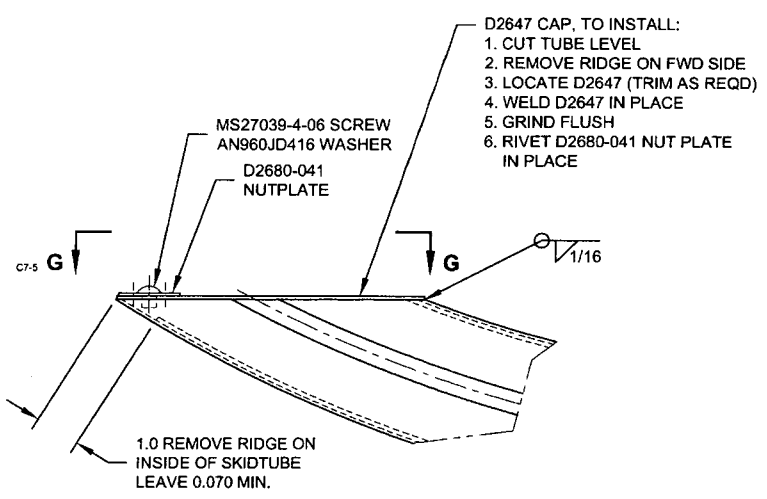


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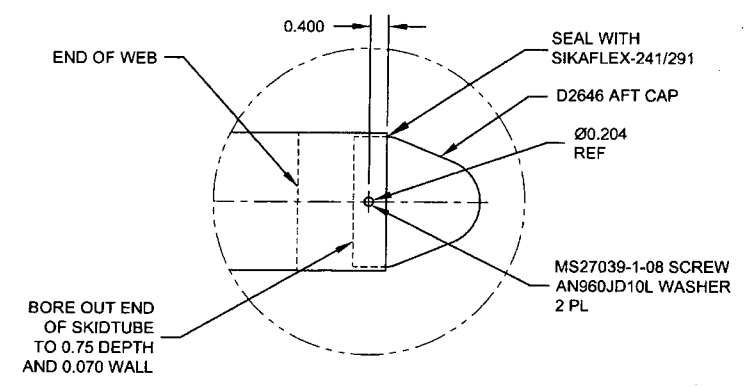
RELEASED  
09 09 03 03



**VIEW G-G**  
SCALE NONE A7-5



**DETAIL E**  
SCALE NONE B7-2 B7-3



**DETAIL F**  
SCALE NONE B2-2 B2-3

DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 5 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 283

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 79243  
Part number: A206-642-151  
Description: Skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Alum.  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier David Pineda Date of Test Coupon 12.02.22  
Welder Barclay Elliott Date of Test Coupon 12.02.22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld